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Chen et al.

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(54) **ARMREST ADJUSTMENT DEVICE**

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(52) **U.S. Cl.**
USPC **297/411.37**; 297/411.35

(58) **Field of Classification Search**
USPC 297/411.2, 411.35, 411.37
See application file for complete search history.

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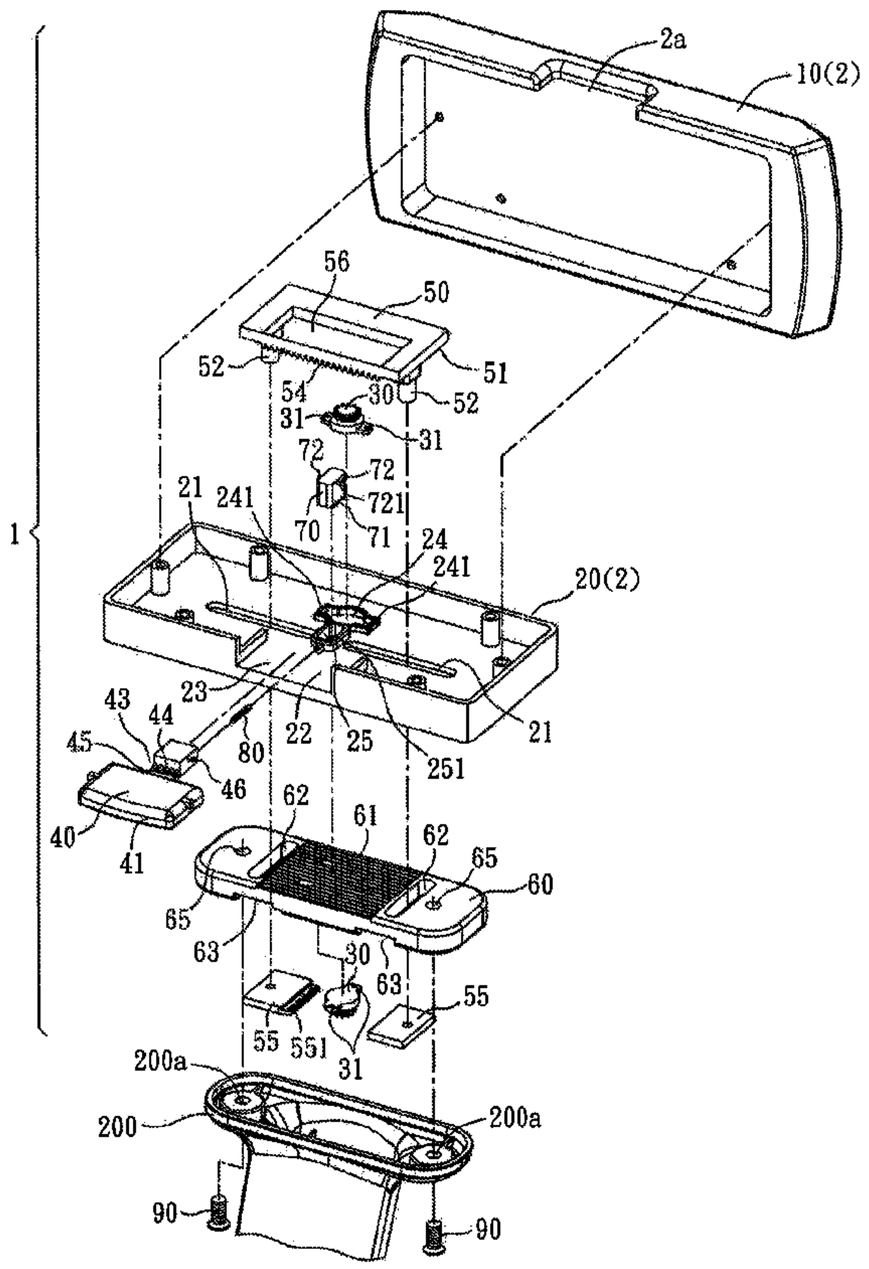
(57) **ABSTRACT**

An armrest adjustment device includes an armrest arranged at a top surface of an armrest support. The lower part of the armrest support is connected to a chair seat. The armrest can be adjusted to move forward and backward in relation to the chair seat. A first component is mounted in the armrest. The first component is assembled with and fixed on the armrest support so that the armrest can be moved forward and backward in relation to the first component. Moreover, a second component is arranged between the armrest and the armrest support. Instead of the first component, the second component is assembled with and fixed on the armrest support. Thus the armrest is moved in the left/right direction in relation to the second component.

11 Claims, 11 Drawing Sheets



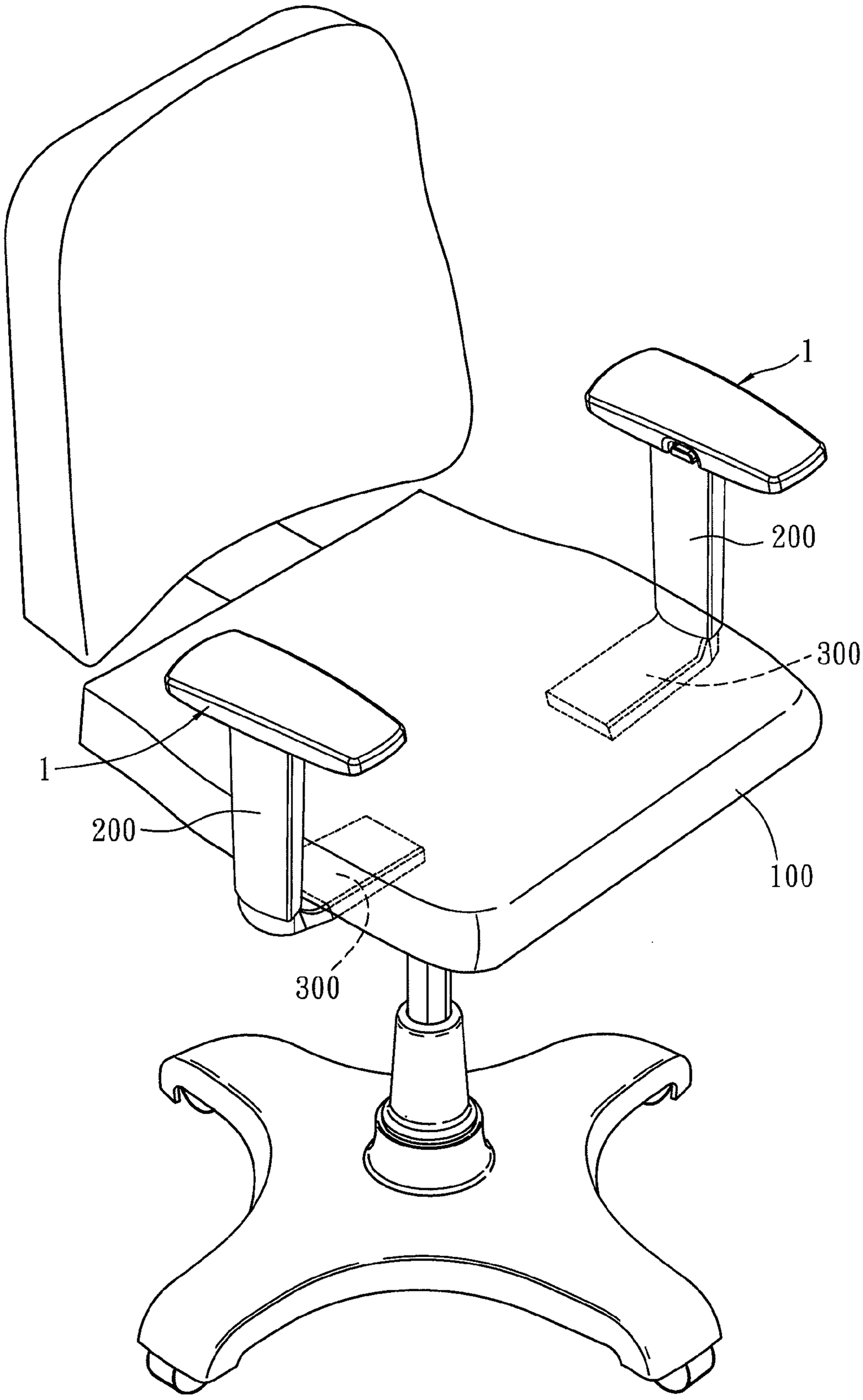


FIG. 1

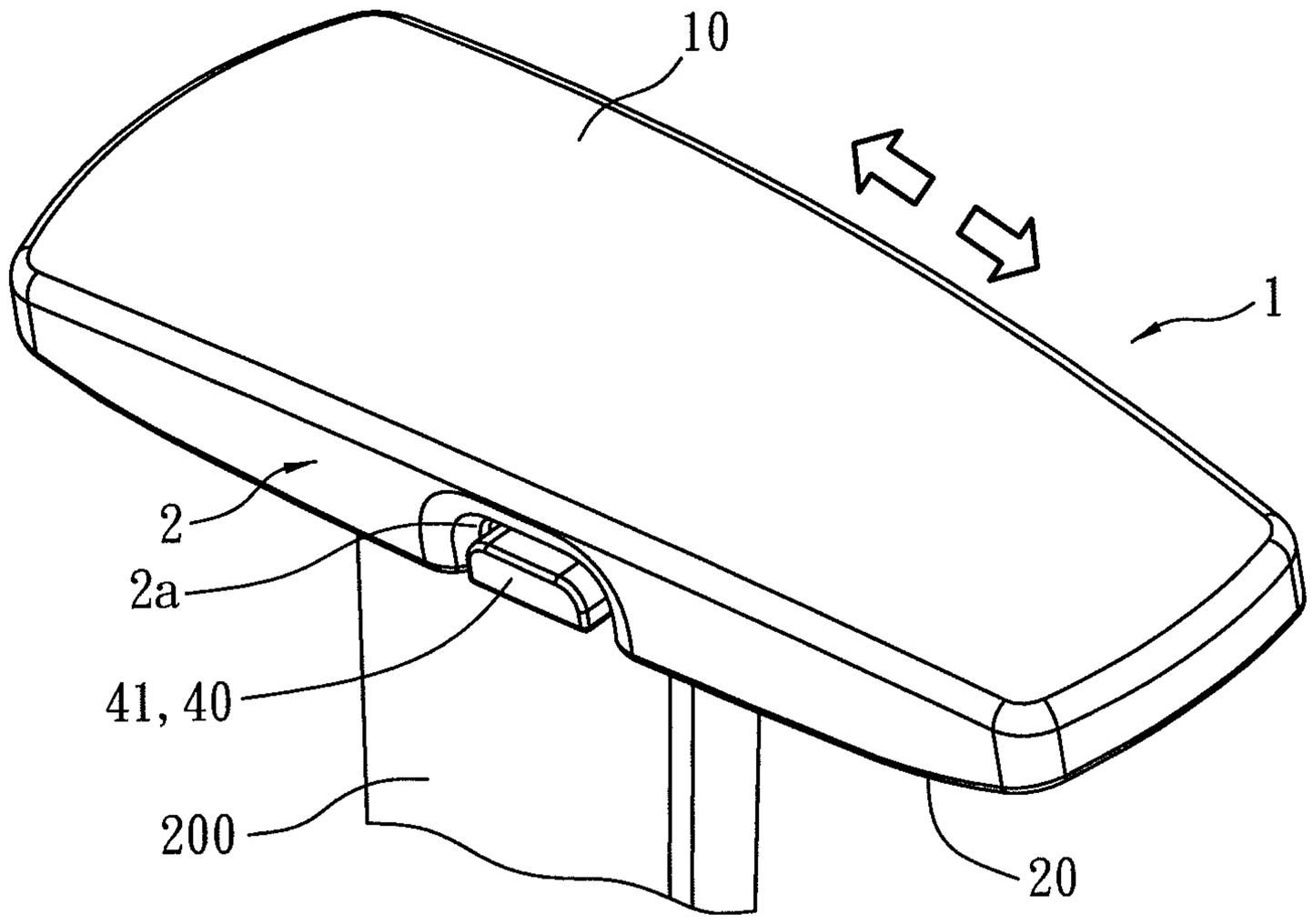
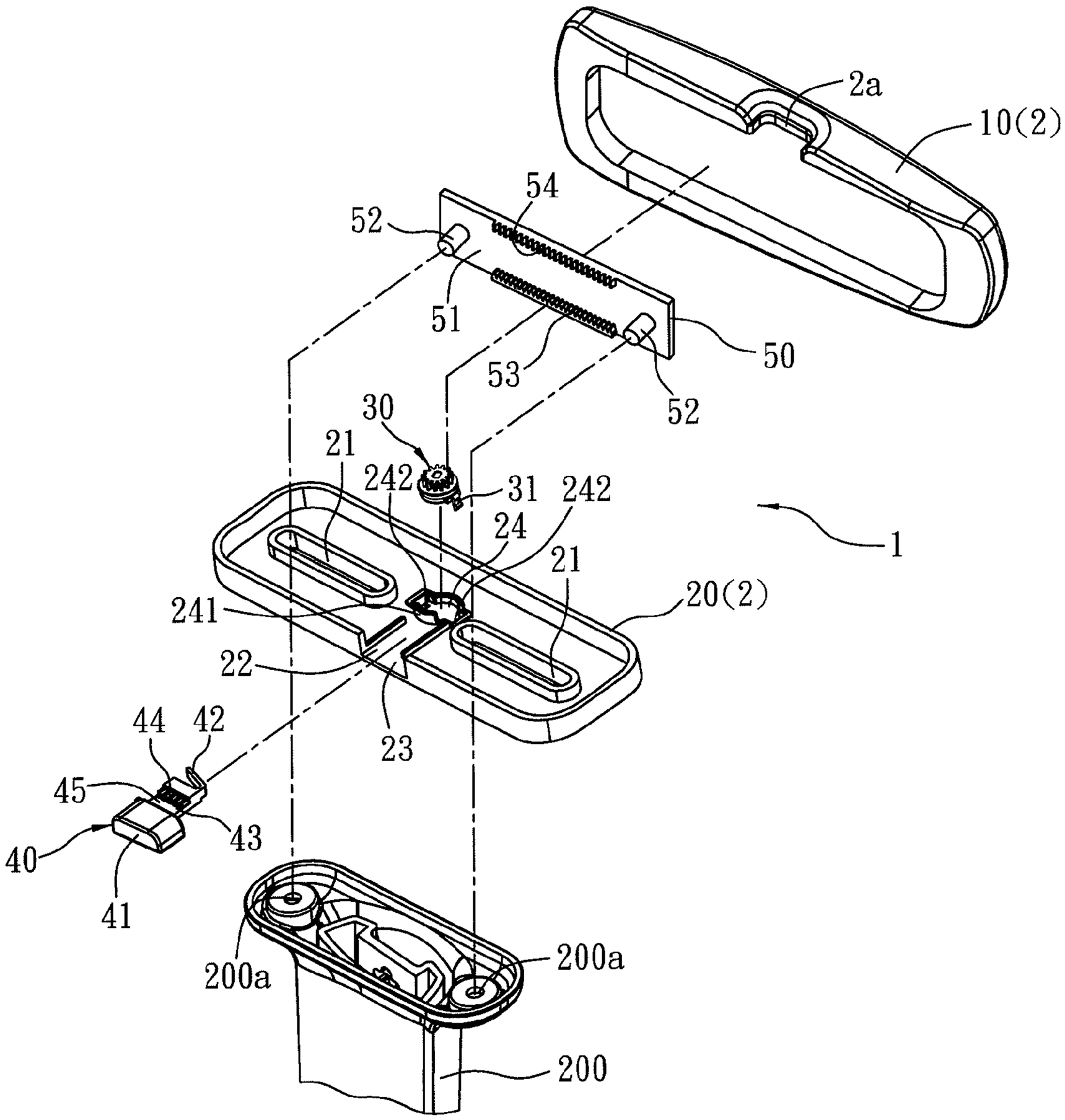


FIG. 2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10(2)
54
52
51
53
50
52
30
21
242
31
242
24
21
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241
20(2)
22
23
44
42
45
43
40
41
200a
200a
200

FIG. 3

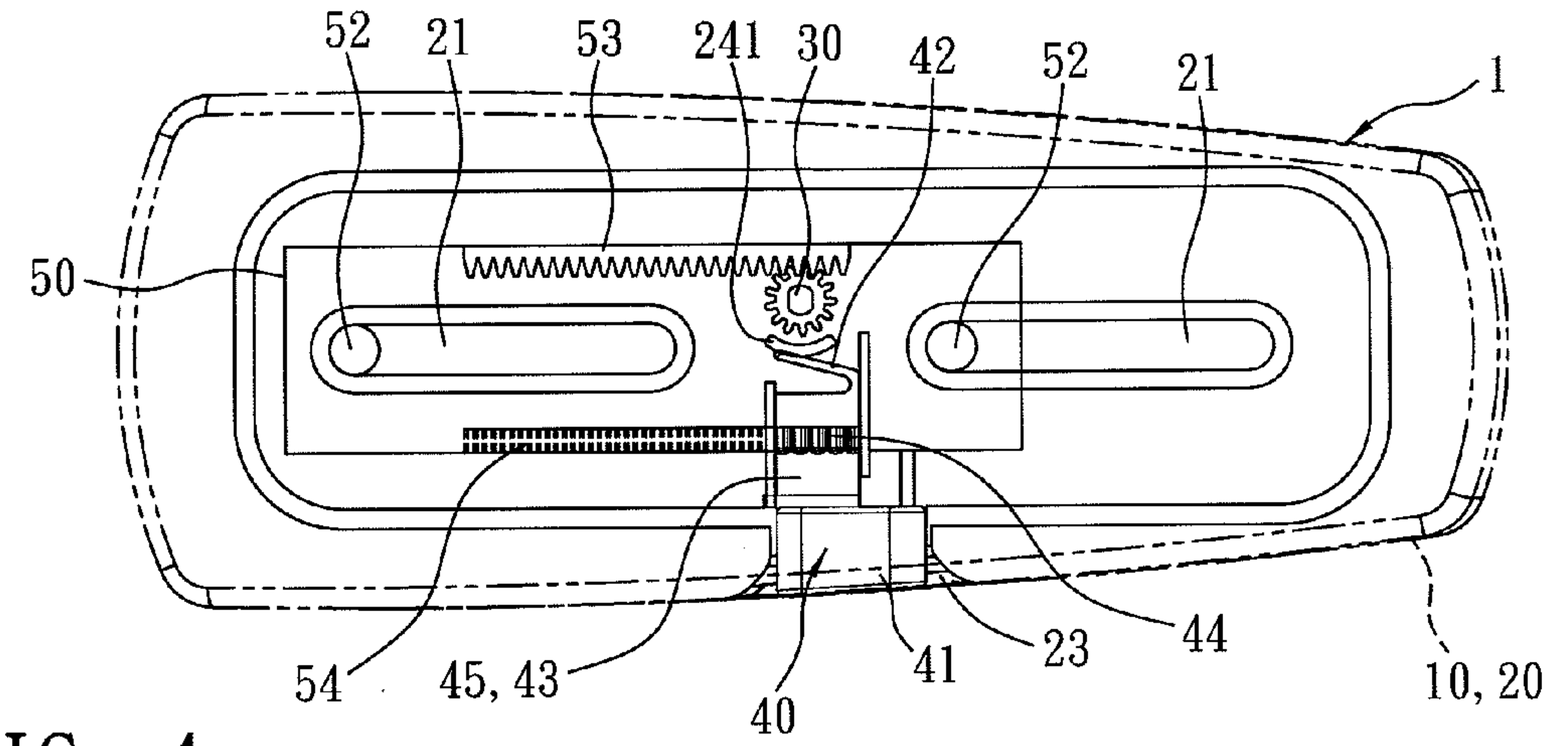


FIG. 4

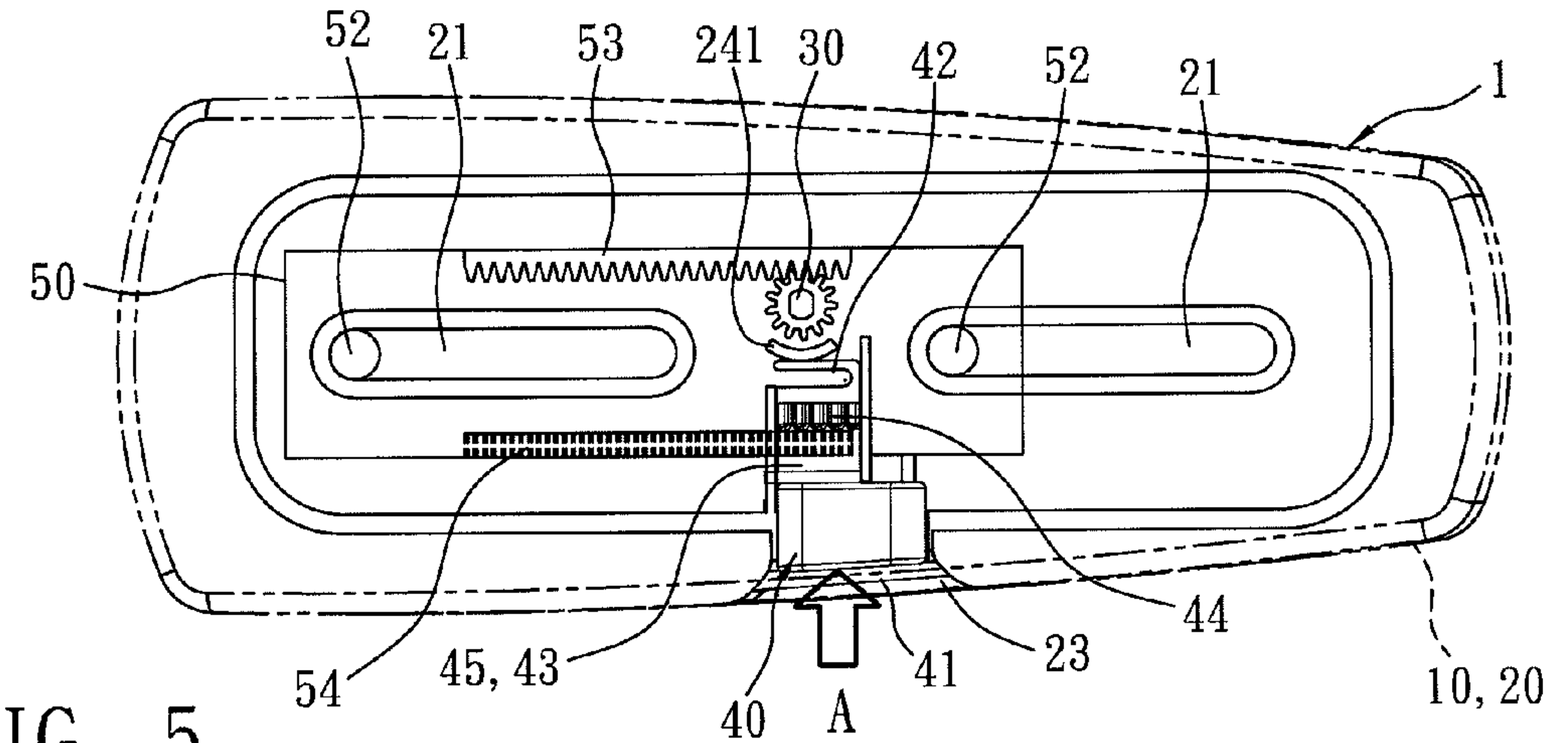


FIG. 5

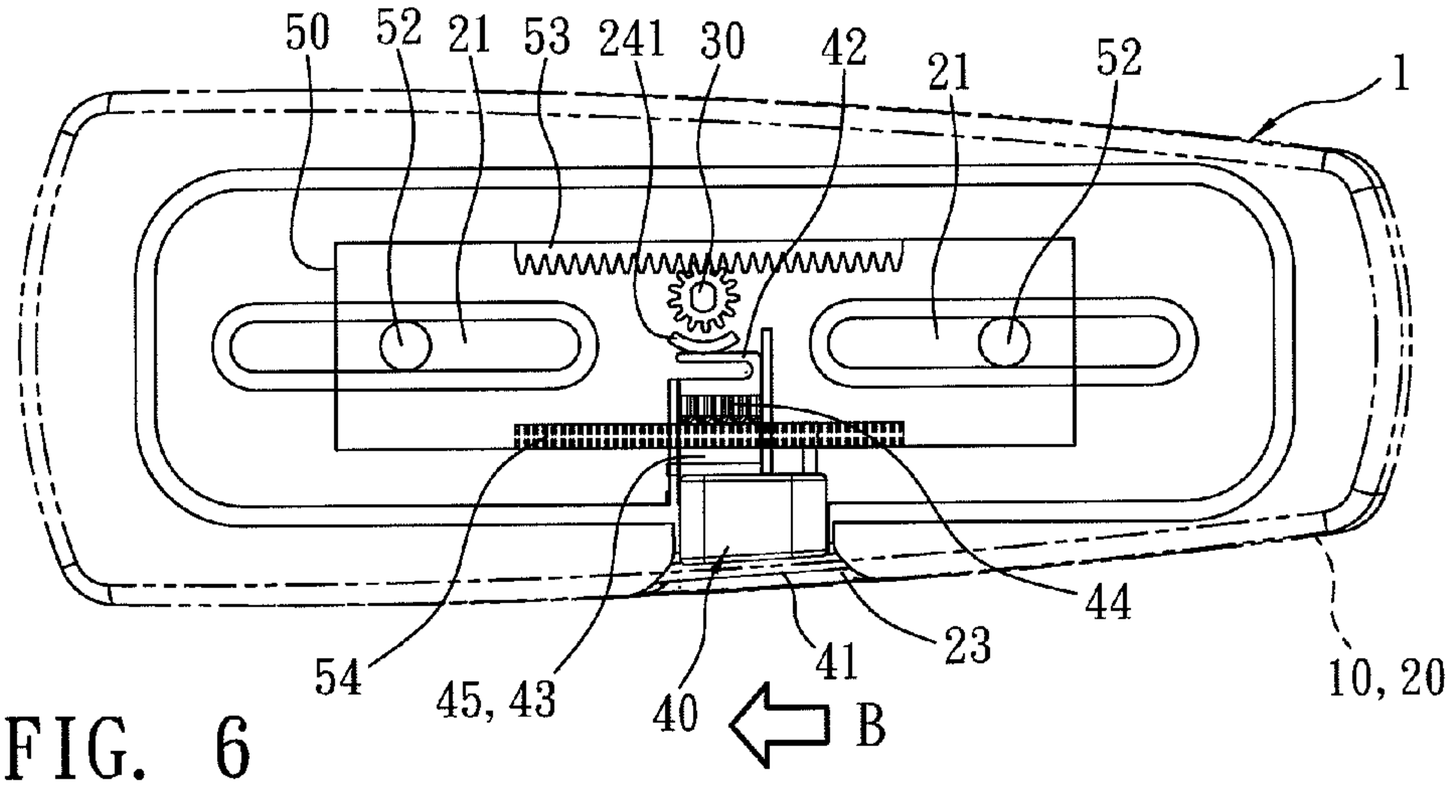


FIG. 6

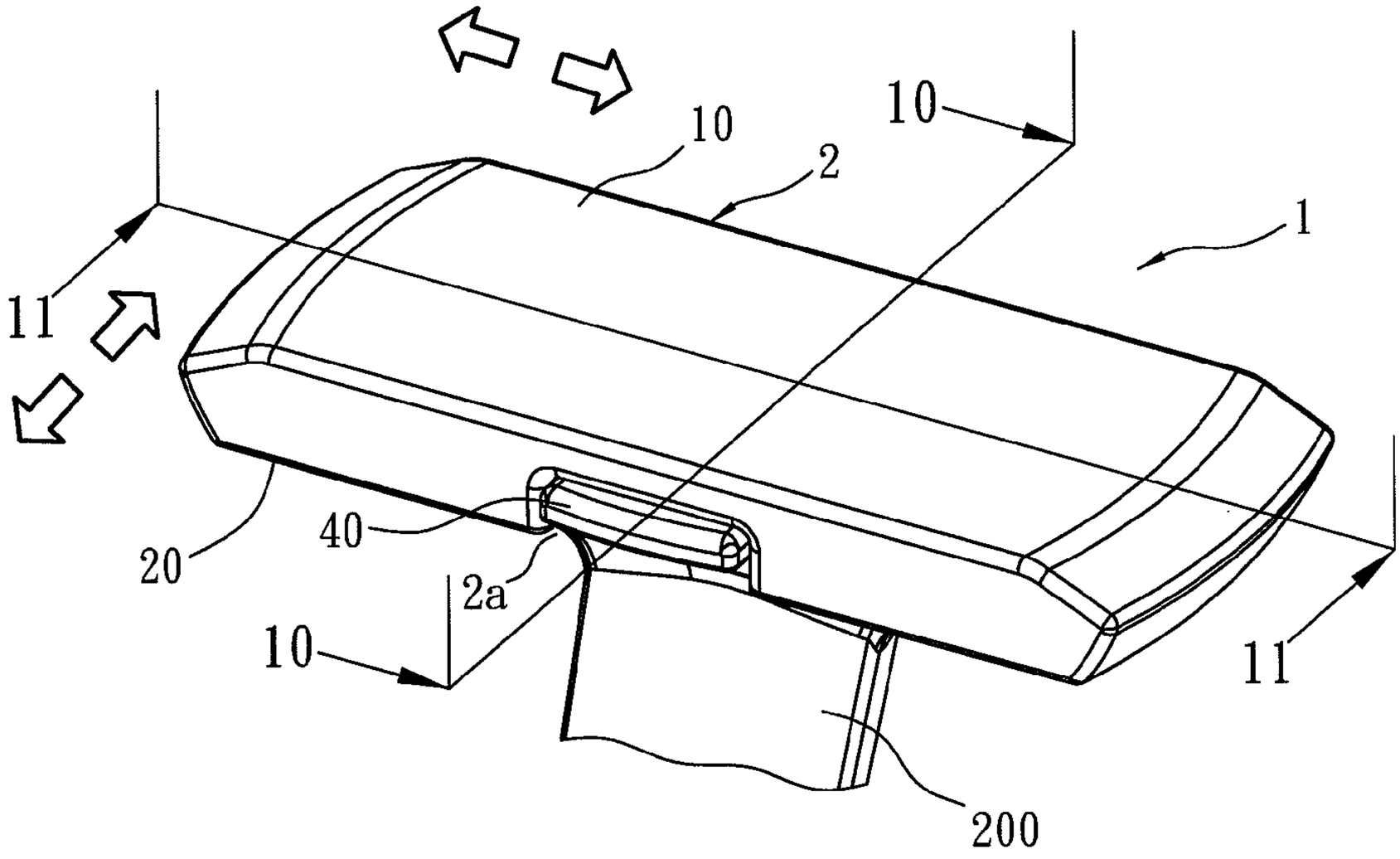
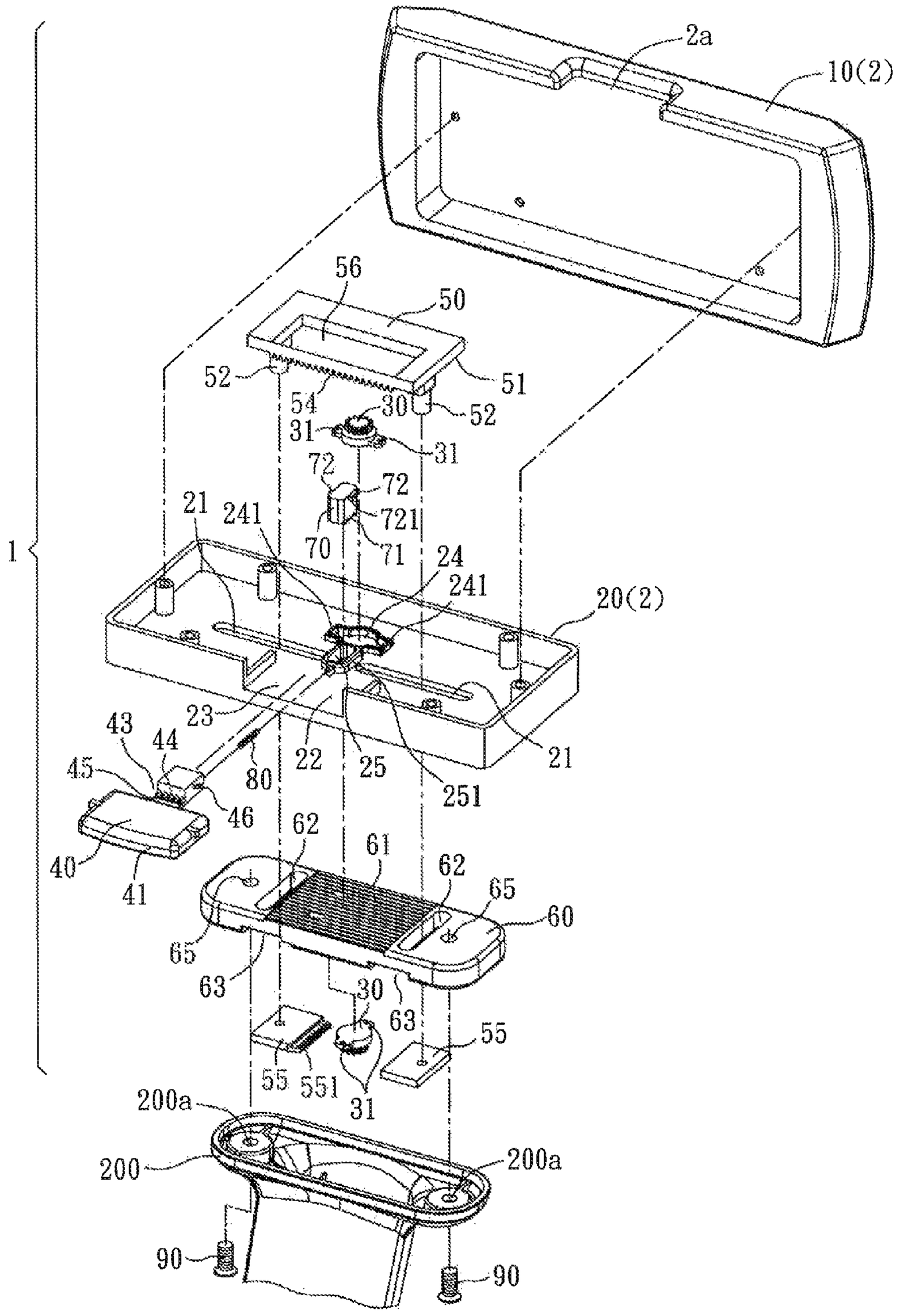


FIG. 7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50
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72
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721
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241
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71
1
24
241
20(2)
23
22
25
21
43
44
45
80
251
46
62
61
62
65
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65
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30
63
55
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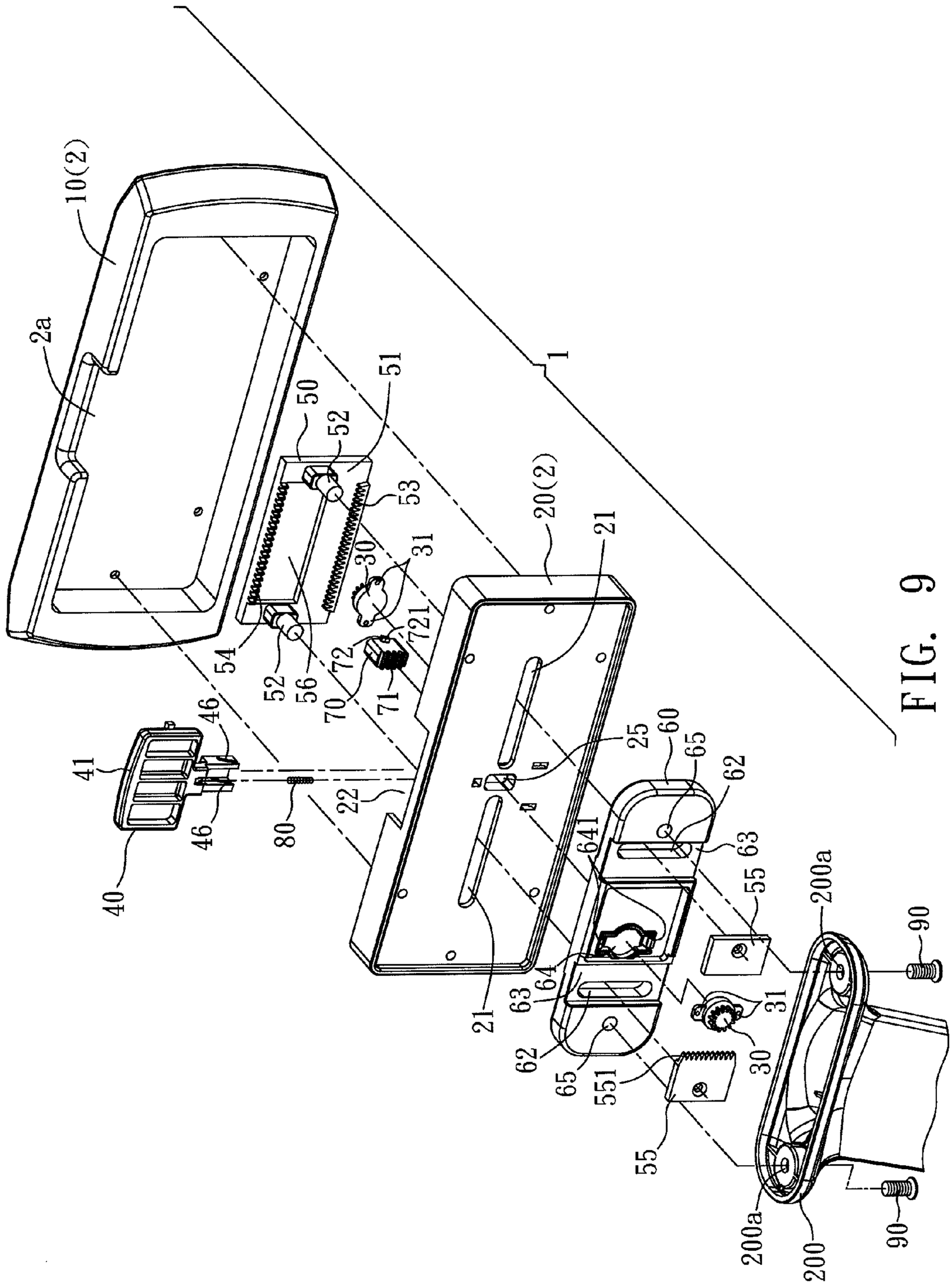
551
31
200a
200a
200
90
90

FIG. 8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20(2)
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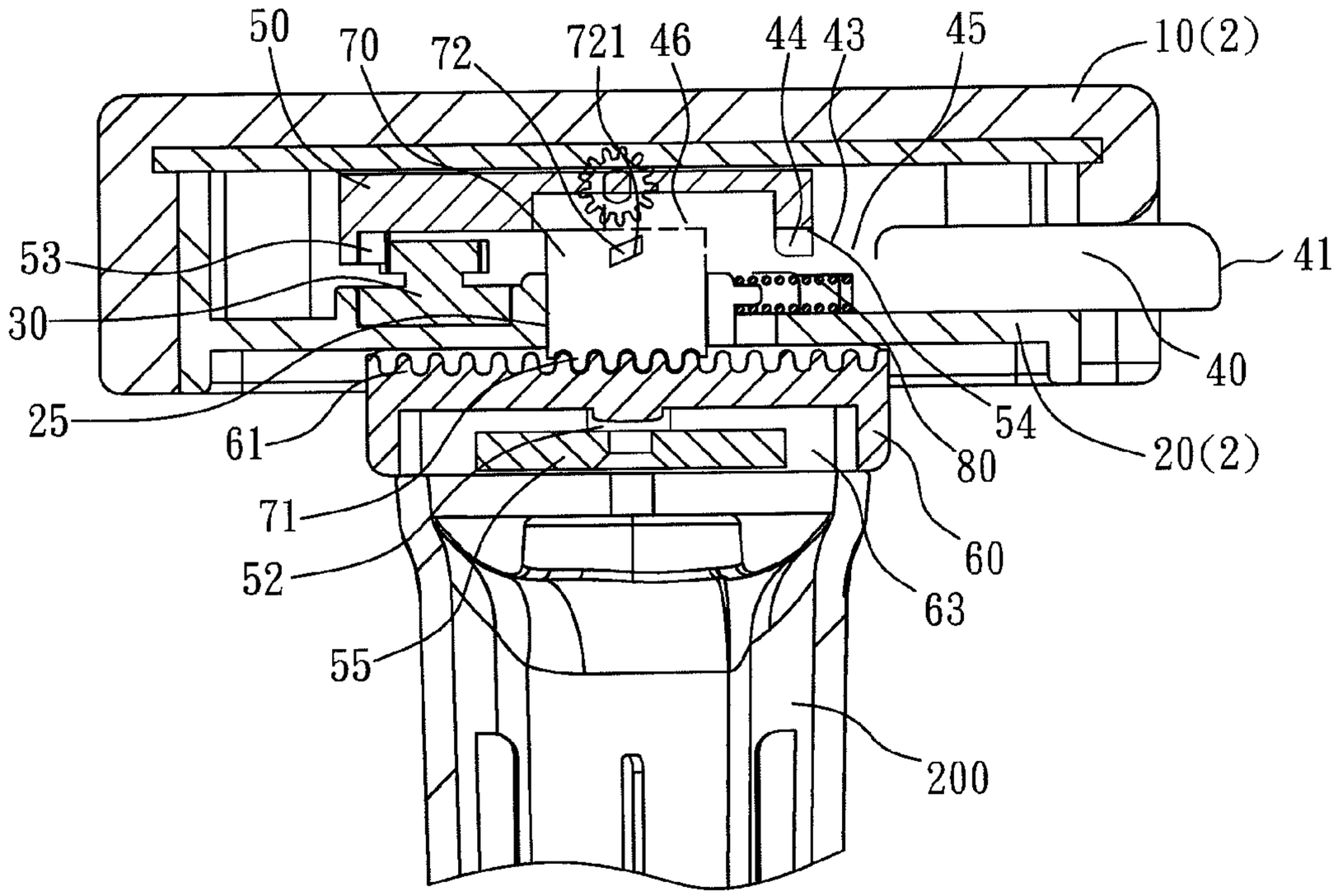
641
63
55
200a
90
64
551
200

FIG. 9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44
43
45
10(2)
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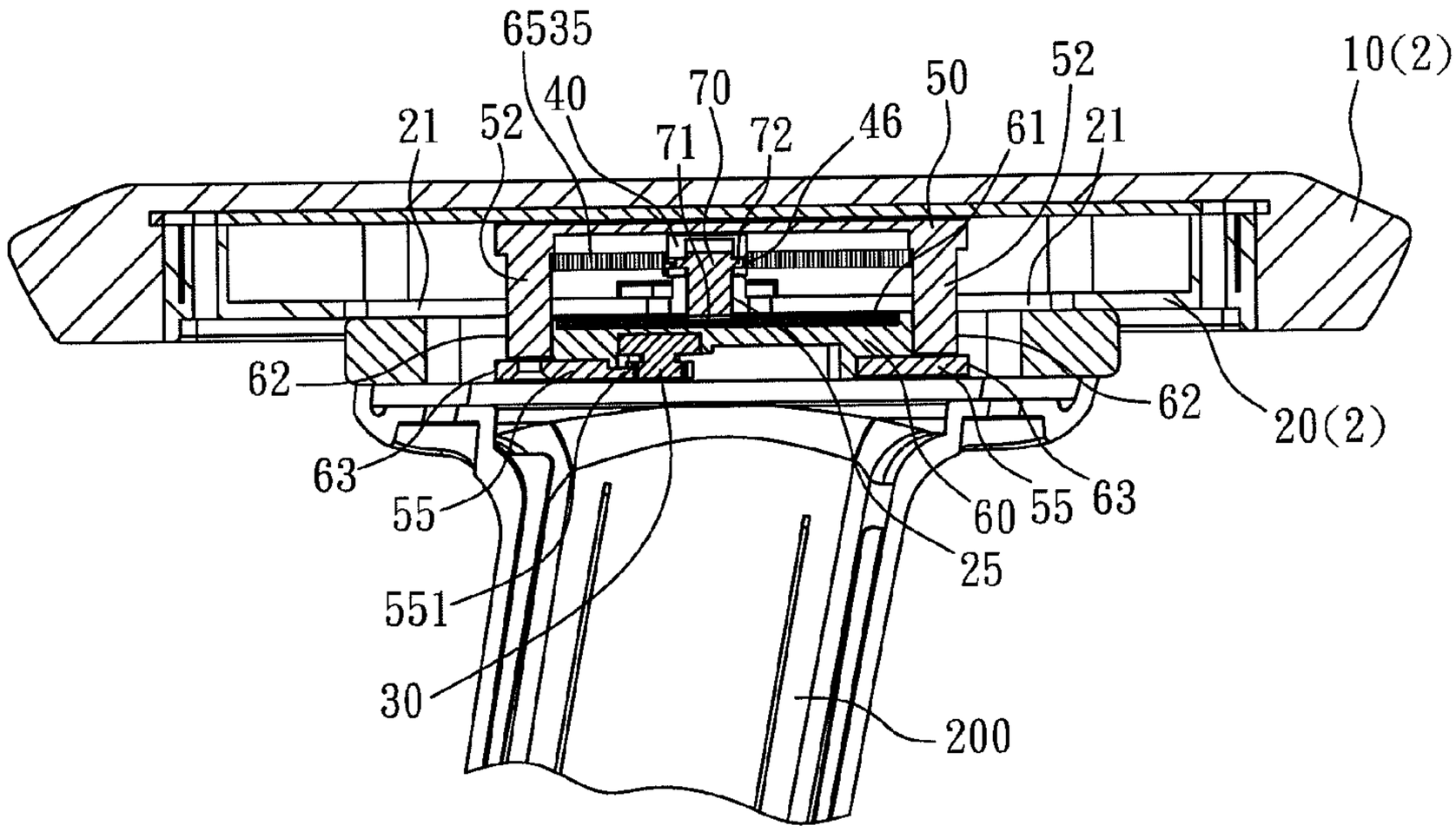
61
54
80
20(2)
71
60
52
63
55
200

FIG. 10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10(2)
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63
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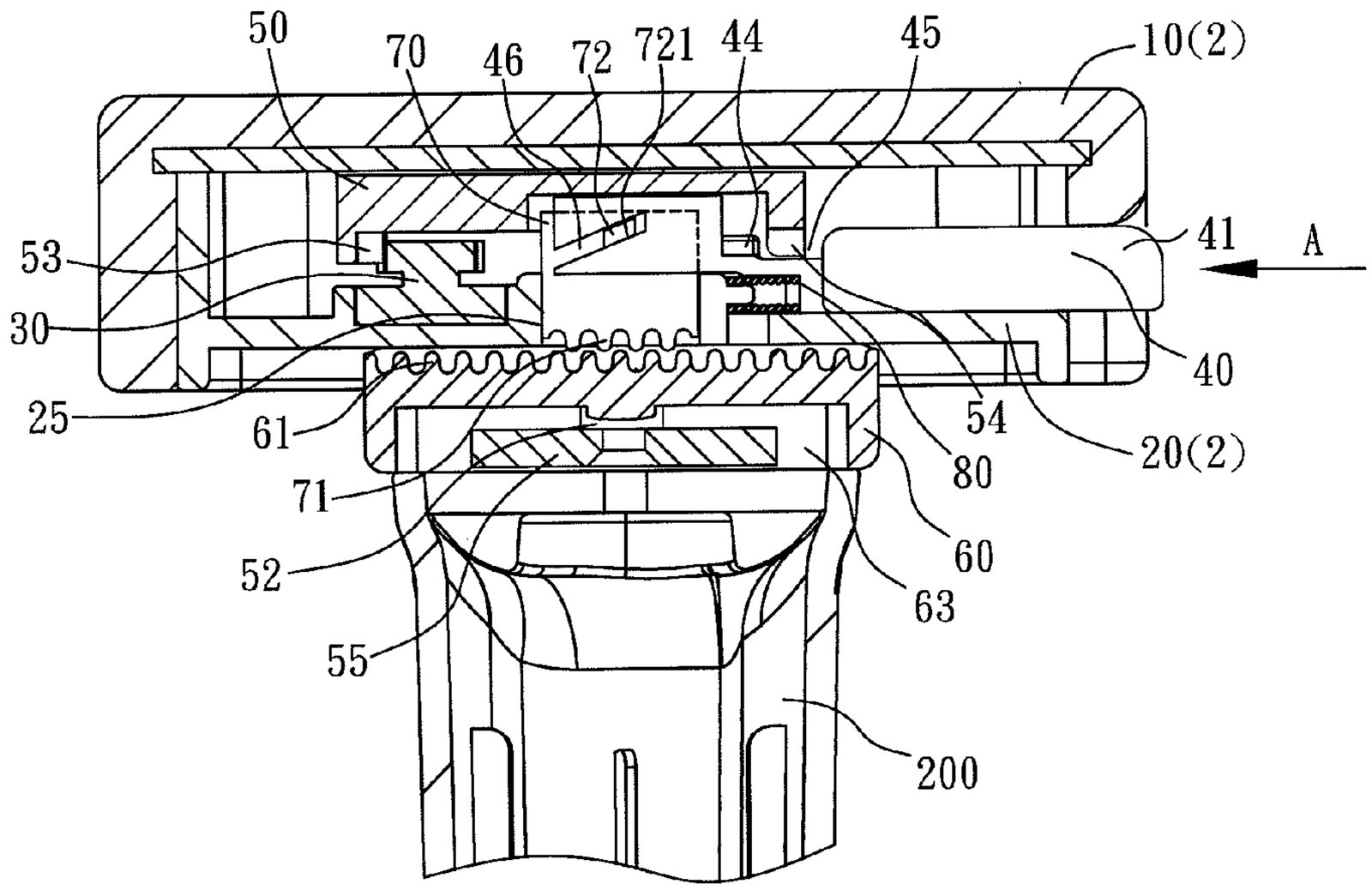
60
55
63
20(2)
25
551
30
200

FIG. 11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721
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10(2)
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A
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40
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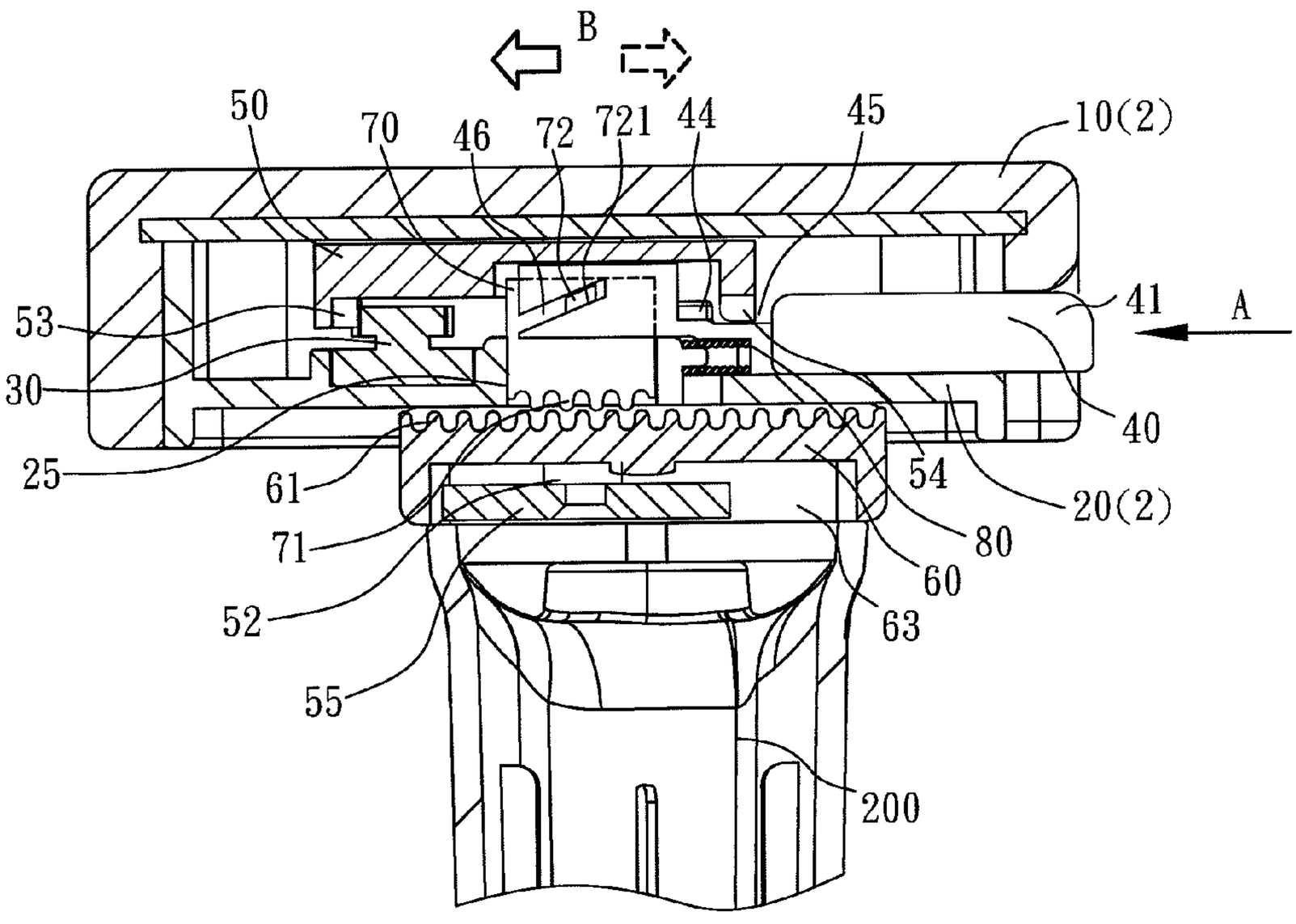
54
80
20(2)
71
60
52
63
55
200

FIG. 12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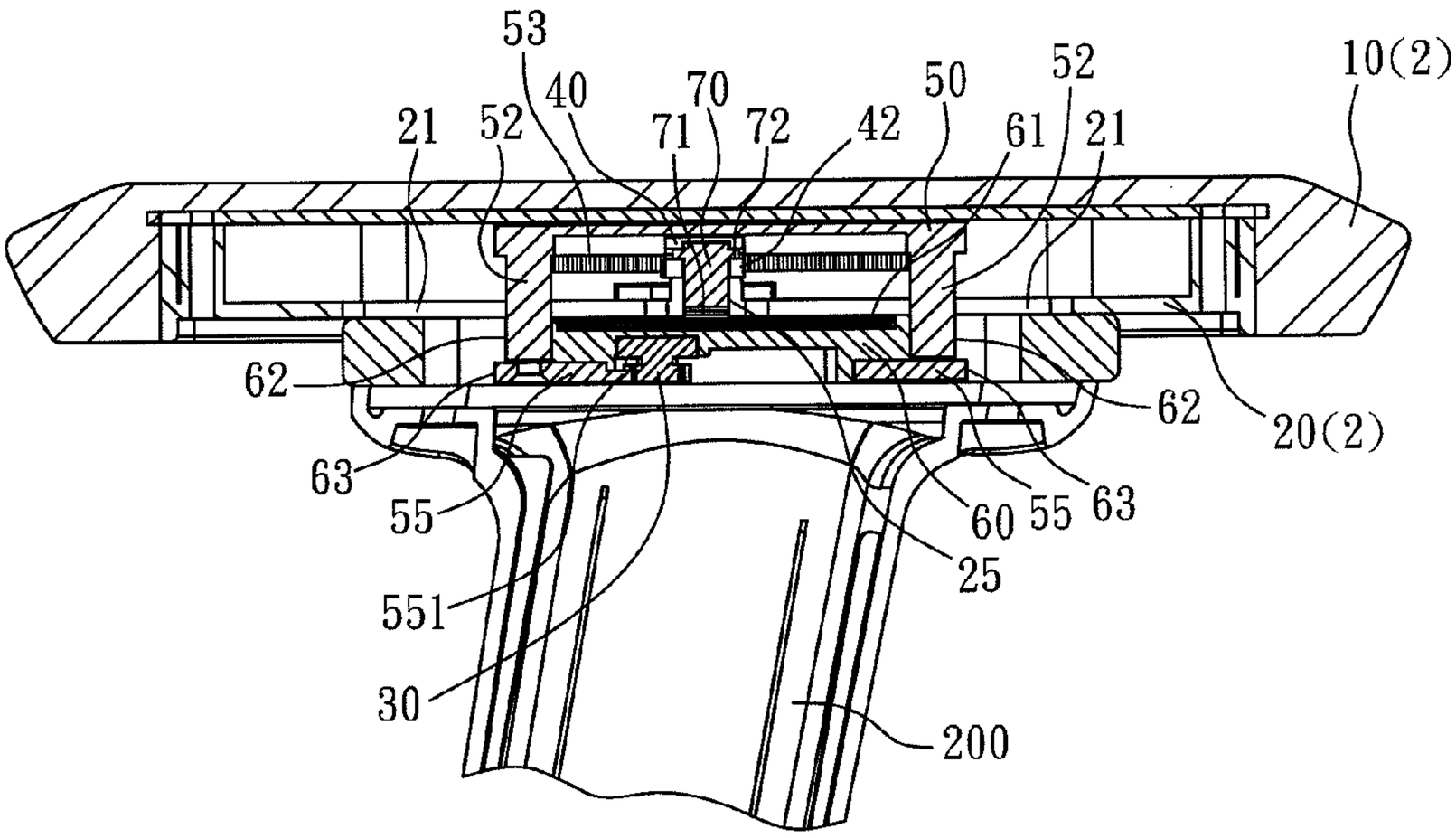
60
52
63
55
200

FIG. 13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10(2)
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20(2)
63
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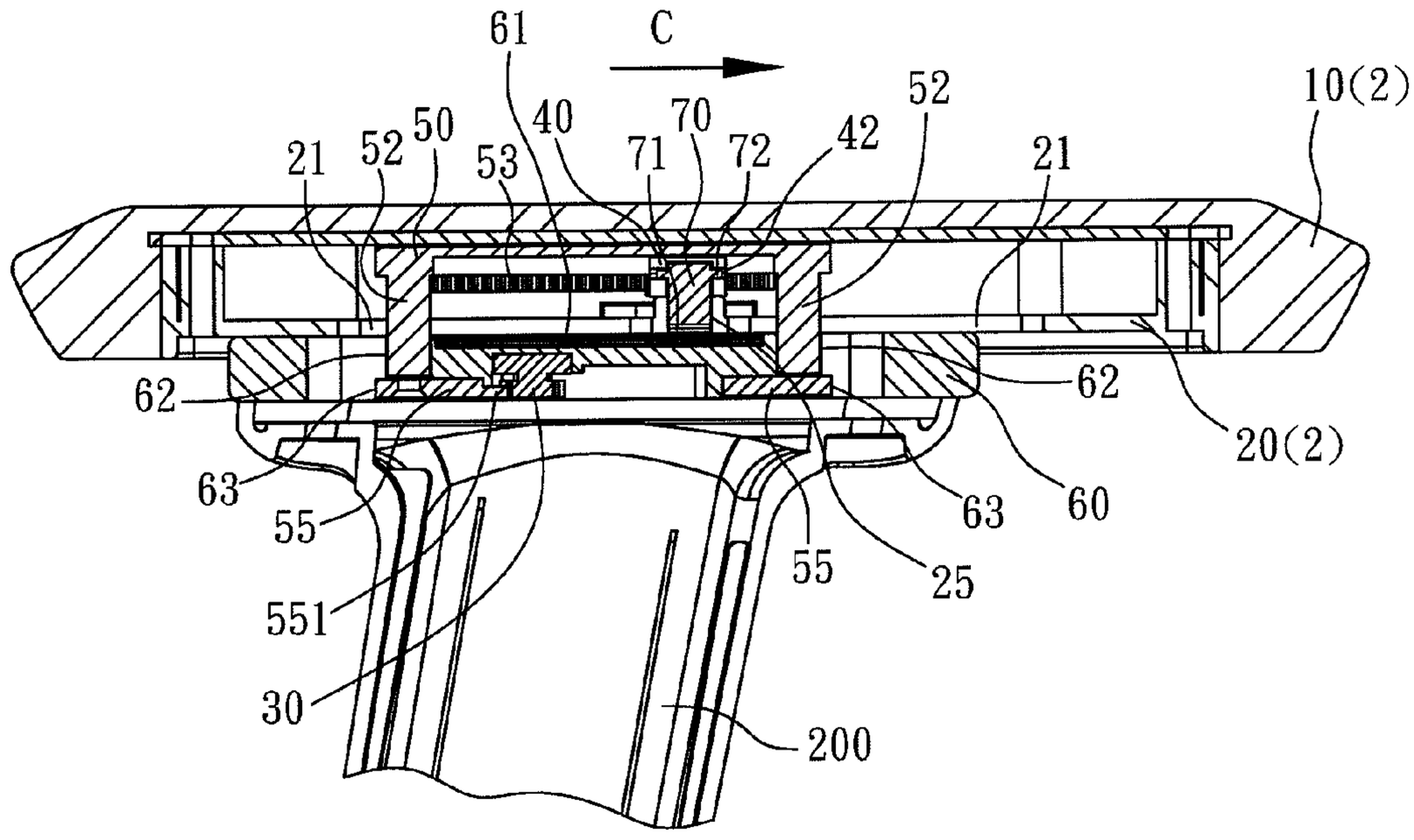
60
55
63
25
551
30
200

FIG. 14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53
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20(2)
63
55
60
63
55
25
551
30
200

FIG. 15

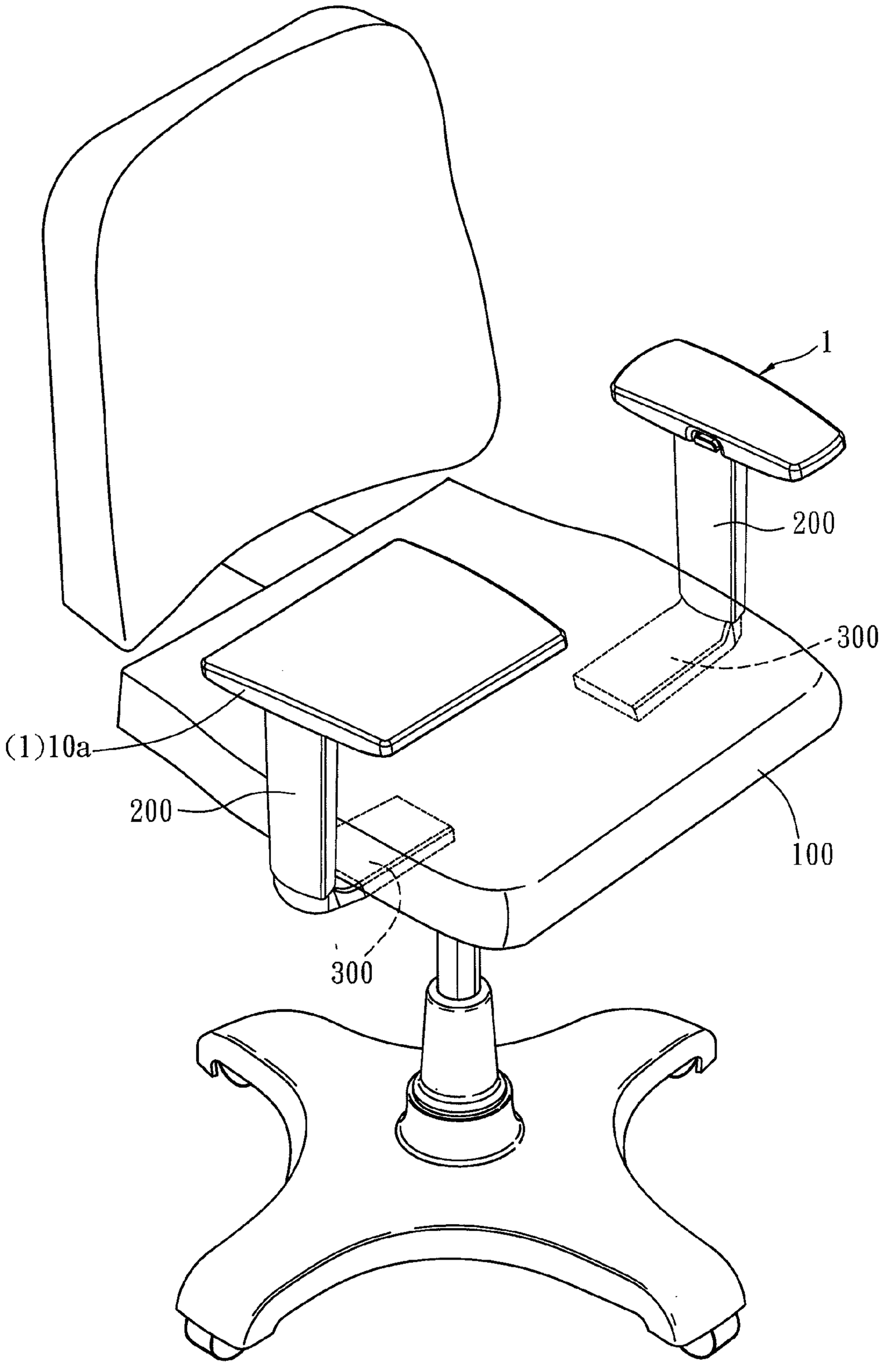

FIG. 16

ARMREST ADJUSTMENT DEVICE

BACKGROUND OF THE INVENTION

The present invention relates to an armrest adjustment device, especially to an armrest adjustment device that enables an armrest moving horizontally toward different directions. Moreover, the armrest adjustment is with simple structure and easy operation.

There are various designs of armrests available now. In order to make sitting more comfortable, the armrest can be adjusted in different directions according to figure of people sit in chairs.

Generally, an armrest consists of an armrest and an armrest support. The armrest is arranged at a top surface of the armrest support while the armrest support is fastened and fixed on the left side and the right side of a chair seat. The armrest adjustment involves adjusting the width of the armrest in the horizontal direction and the height of the armrest in the vertical direction. A horizontal adjustment part is for sliding the armrest forward or backward or rotating the armrest and usually is disposed on the armrest. A height adjustment part is for adjusting height of the armrest and is arranged at the armrest support. Refer to US Pat. Pub. No. 2008/0084103, an armrest having a rotational, longitudinal and lateral adjustment mechanism is revealed. However, the armrest has many components and complicated structure. Thus the assembling of the armrest is difficult and the production cost is high. This is not beneficial to mass production and market competitiveness. There is great room for improvement.

SUMMARY OF THE INVENTION

Therefore it is a primary object of the present invention to provide an armrest adjustment device includes an armrest arranged at a top surface of an armrest support. The lower part of the armrest support is connected to a chair seat. The armrest can be adjusted by fore/aft movement in relation to the chair seat. The movement of the armrest is stable, smooth and quiet and both the moving distance and the final position of the armrest can be controlled precisely.

It is another object of the present invention to provide an armrest adjustment device that is also moved in the left/right direction besides the forward and backward movement. The movement of the armrest is stable, smooth and quiet. Moreover, the moving distance and the stopped position of the armrest can be controlled precisely.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a schematic drawing showing a relative position between an armrest adjustment device of the present invention and a chair seat;

FIG. **2** is a perspective view of an embodiment of an armrest adjustment device according to the present invention;

FIG. **3** is an explosive view of an embodiment of an armrest adjustment device according to the present invention;

FIG. **4**, FIG. **5**, and FIG. **6** are schematic drawing showing movement of an armrest before and after adjustment;

FIG. **7** is a perspective view of another embodiment of an armrest adjustment device according to the present invention;

FIG. **8** is an explosive view of another embodiment of an armrest adjustment device according to the present invention;

FIG. **9** is another explosive view of the embodiment shown in FIG. **8**;

FIG. **10** is a partial cross sectional view of the embodiment in FIG. **7** along **10-10** line;

FIG. **11** is a partial cross sectional view of the embodiment in FIG. **7** along **11-11** line;

FIG. **12** and FIG. **13** are schematic drawings showing leftward/rightward movement of the embodiment in FIG. **10**;

FIG. **14** and FIG. **15** are schematic drawings showing forward/backward movement of the embodiment in FIG. **11**;

FIG. **16** is a schematic drawing showing a table-shaped armrest pad arranged at a chair seat of an embodiment according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Embodiment One

Refer from FIG. **1** to FIG. **3**, an armrest adjustment device of the present invention is disposed on each side of a chair seat **100** for resting a sitter's arm and adjusting fore/after(aft) position. The armrest adjustment device of the present invention includes an armrest **1** disposed on a top surface of an armrest support **200**. A projecting block **300** extending from a lower part of the armrest support **200** is connected to a bottom surface of the chair seat **100**. The armrest **1** can be moved forward and backward in relation to the armrest support **200**, as the arrows indicated in FIG. **2**. That means the armrest **1** is moved toward the front side or the rear side of the chair seat **100**.

Refer to FIG. **3**, the armrest **1** includes an armrest pad **10** and an armrest base **20**, a damping part **30**, a press member **40** and a first component **50**. The armrest pad **10** and the armrest base **20** are assembled correspondingly to form an armrest body **2**. A rectangular internal space for receiving related components is formed in the armrest body **2**, between the armrest pad **10** and the armrest base **20**. An opening **2***a* for mounting the press member **40** is arranged at one side of the armrest body **2**.

Two symmetrical slots **21** with the same length are arranged at a middle part of the armrest base **20** along the same direction of the fore/aft movement of the armrest **1**. The length of the slot **21** is the maximum movement (travel) of the armrest base **20**. A gap **22** is mounted on one side of the armrest base **20** and is aligned with the opening **2***a* of the armrest body **2**. A sliding slot **23** is disposed on the armrest base **20**, near the gap **22** so as to restrict movement of the press member **40** and prevent the press member **40** from falling out of the sliding slot **23**. A mounting slot **24** for mounting and fixing the damping part **30** is arranged at an outer side of the armrest base **20**. One side of the mounting slot **24**, opposite to the gap **22** is arranged with a projecting piece **241** for stopping the press member **40**.

The damping part **30** is used to reduce impacts and vibrations for providing stability, such as a damping gear. The damping part **30** is assembled in the mounting slot **24** of the armrest base **20**. Each of two sides of the damping part **30** is disposed with an elastic locking block **31** that is locked with and fixed into a locking slot **242** of the mounting slot **24**.

A press part **41** for being pressed by users is on one end of the press member **40** while an elastic part **42** is arranged at the other side, opposite to the press part **41**. Due to the elasticity of the elastic part **42**, the press member **40** acts elastically after being pressed and released. The elastic part **42** can be a spring or a dome connected to and integrated with the press member **40** to simplify the structure. An open slot **43** with a proper size and an opening facing upwards is set between the press part **41** and the elastic part **42**. At least one projective body **44** is disposed on a bottom of the open slot **43** near the side of the elastic part **42** while a channel **45** is formed on the

bottom of the open slot **43** near the press part **41**. The press member **40** is passed the gap **22** of the armrest base **20** to be mounted on the sliding slot **23** on the bottom of the armrest base **20** and the elastic part **42** is elastically against the projecting piece **241** on the side of the mounting slot **24** of the armrest base **20**. While the press part **41** being pressed to push the press member **40** moving inward along the sliding slot **23**, the elastic part **42** is compressed to lean against the projecting piece **241**. When the press part **41** is released, the press member **40** is moved outward along the sliding slot **23** due to recovering elasticity of the elastic part **42**.

The first component **50** is mounted inside the armrest body **2**. A bottom surface **51** of the first component **50** is disposed with two posts **52**, a positioning member **53** and a plurality of grooves **54** arranged at regular intervals. The two posts **52** are respectively arranged at a front part and a rear part on the bottom surface **51**. The positioning member **53** can be a rack that is corresponding to and engaged with the damping part **30** while the groove **54** is corresponding to the open slot **43** of the press member **40** and is engaged with the projective body **44** of the open slot **43** for positioning.

While being assembled, each of the two posts **52** on the first component **50** passes the slot **21** on the middle of the armrest base **20** to be fixed into a hole **200***a* of the armrest support **200** correspondingly and the positioning member **53** is against the damping part **30**. The groove **54** is correspondingly engaged with at least one projective body **44** of the open slot **43** of the press member **40**.

The armrest pad **10**, the armrest base **20**, the damping part **30**, and the press member **40** are assembled into a removable armrest **1** while the first component **50** and the armrest support **200** are fixed and connected. While being operated, the armrest **1** is moved forward and backward in relation to the first component **50** and the armrest support **200** and is moved stably by the positioning member **53** of the first component **50** against the damping part **30**. The armrest **1** is positioned by the groove **54** engaged with the projective body **44**. Thus the fore/aft movement and adjustment of the armrest **1** are achieved, as a front arrow and a rear arrow indicated in FIG. **2**.

Refer to FIG. **4**, the figure shows a state of the armrest **1** before the adjustment.

Refer to FIG. **5**, the press part **41** of the press member **40** is pressed so that the press member **40** is moved inward along the sliding slot **23** of the armrest base **20**, in the direction of the arrow A indicated. The elastic part **42** of the press member **40** is stopped by the projecting piece **241** on the side of the mounting slot **24** to become compressed. The slots **54** of the first component **50** are corresponding to the channel **45** of the open slot **43** for forward/backward movement and adjustment of the armrest **1**.

Refer to FIG. **6**, then the armrest **1** is moved leftward, as the arrow B indicated, or moved into the opposite direction (not shown in figure). After the armrest **1** being moved to a proper position, the press member **40** is released and then moved outward along the sliding slot **23** of the armrest base **20** by the elastic recovery force of the elastic part **42**. And the slot **54** of the first component **50** is engaged with the projective body **44** of the open slot **43**. Thus the armrest **1** is stopped and positioned, as shown in the FIG. **4**.

Moreover, when the armrest **1** is moved forward or backward, the movement is with damping effects due to the damping part **30** and the positioning member **53** of the first component **50**. Thus the movement of armrest **1** is stable, smooth and quiet. Furthermore, the moving distance can be controlled precisely by the grooves **54** on the first component **50** engaged with the projective body **44** of the open slot **43**.

Embodiment Two

Refer to FIG. **1**, FIG. **7**, FIG. **8**, and FIG. **9**, an armrest adjustment device is disposed on one side of a chair seat **100** and is for fore/aft and left/right movement of the armrest. The armrest adjustment device of the present invention includes an armrest **1** arranged at a top surface of an armrest support **200**. A projecting block **300** extending from a lower part of the armrest support **200** is connected to a bottom surface of the chair seat **100**. The armrest **1** can be moved forward/backward and leftward/rightward in relation to the armrest support **200**, as the fore/aft, left and right arrows indicated in FIG. **7**. That means the armrest **1** is moved toward the front side, the rear side, the left side and the right side of the chair seat **100**.

The armrest **1** includes an armrest pad **10** and an armrest base **20**, a damping part **30**, a press member **40**, a first component **50**, a second component **60** and an adjustment member **70**. The armrest pad **10** and the armrest base **20** are assembled correspondingly to form an armrest body **2**. A rectangular internal space for receiving related components is formed in the armrest body **2**, between the armrest pad **10** and the armrest base **20**. An opening **2***a* for mounting the press member **40** is arranged at one side of the armrest body **2**.

Two symmetrical slots **21** with the same length are arranged at a middle part of the armrest base **20** along the same direction of the fore/aft movement of the armrest **1**. The length of the slot **21** is the maximum movement (travel) of the armrest base **20**. A gap **22** is mounted on one side of the armrest base **20** and is aligned with the opening **2***a* of the armrest body **2**. A sliding slot **23** is disposed on the armrest base **20**, near the gap **22** so as to restrict movement of the press member **40** and prevent the press member **40** from falling out of the sliding slot **23**. A receiving hole **25** for receiving the adjustment member **70** and corresponding to the gap **22** is disposed on the armrest base **20**. A circular wall **251** is set around the receiving hole **25** and is used to stop the press member **40**. A mounting slot **24** for mounting and fixing the damping part **30** is arranged at an outer side of the armrest base **20**.

The damping part **30** is for reducing impacts and vibrations to provide stability, such as a damping gear. The damping part **30** is assembled over the mounting slot **24** of the armrest base **20**. Each of two sides of the damping part **30** is disposed with an elastic locking block **31** that is locked with and fixed into a locking slot **242** of the mounting slot **24**.

The adjustment member **70** is set in the receiving hole **25** of the armrest base **20**, passing through the circular wall **251** of the receiving hole **25**. At least one projective body **71** is disposed on the bottom of the adjustment member **70** and two symmetrical lugs **72** are arranged at an upper part of the adjustment member **70**. The lug **72** is over the circular wall **251** of the receiving hole **25** and is including a slant part **721**.

The press member **40** includes a press part **41** on one end and a slanted guide groove **46** on the other end thereof. The press part **41** is used to be pressed and the slanted guide groove **46** is corresponding to and assembled with the lug **72** of the adjustment member **70**. The press member **40** is able to be moved horizontally by the slanted guide groove **46** and a slanted surface **721** of the lug **72** of the adjustment member **70** can be moved vertically within the slanted guide groove **46**. An open slot **43** with a proper size and an opening facing upwards is set between the press part **41** and the slanted guide groove **46**. At least one projective body **44** is disposed on a bottom of the open slot **43** near the side of the slanted guide groove **46** while a channel **45** is formed near the press part **41**. An elastic part **80** is set and contacted elastically between the

press member **40** and the receiving hole **25**. The elastic part **80** can be a spring or a dome connected to and integrated with the press member **40** to simplify the structure. Thus the press member **40** can be moved elastically by the elasticity of the elastic part **80** while being pressed and released. The press member **40** passing the gap **22** of the armrest base **20** is arranged at the sliding slot **23** on the armrest base **20** and the lug **72** of the adjustment member **70** is assembled with the slanted guide groove **46** correspondingly. The elastic part **80** is elastically against the circular wall **251** of the receiving hole **25** of the armrest base **20**.

The first component **50** is arranged inside the armrest body **2**. A post **52** is disposed on a front part and a rear part respectively on a bottom surface **51** of the first component **50**. A guiding block **55** is connected to a bottom end of the post **52**. The bottom surface **51** of the first component **50** is further arranged with a positioning member **53** and a plurality of grooves **54** arranged at regular intervals. The positioning member **53** can be a rack that is corresponding to the damping part **30** while the groove **54** is corresponding to the open slot **43** of the press member **40** and is engaged with the projective body **44** of the open slot **43** for positioning. The first component **50** is further arranged with a long groove **56** that allows the adjustment member **70** moving upward freely. The long groove **56** is arranged along the same direction as that of the fore/aft movement of the armrest **1** and the length of the long groove **56** is the maximum movement (travel) of the armrest base **20**. A positioning member **551** such as a rack is set on one side of the guiding block **55** and is engaged with the damping part **30** correspondingly.

The second component **60** is disposed under the armrest body **2**. The second component **60** is arranged with two threaded holes **65**, a plurality of slots **61** arranged at regular intervals, two long grooves **62**, two guiding slots **63** and a mounting slot **64**. The two threaded holes **65** are respectively arranged at a front part and a rear part of the second component **60**. The slots **61** engaged with the projective body **71** of the adjustment member **70** for positioning are on a middle part of the top surface of the second component **60**. The long grooves **62** in the left/right direction are respectively disposed on a front part and a rear part of the top surface of the second component **60** while the guiding slots **63** penetrating from the left side to the right side are corresponding to the long grooves **62** and arranged at the bottom surface of the second component **60**. As shown in FIG. **9**, the mounting slot **64** is mounted on the bottom surface of the second component **60** and used for mounting and fixing a damping part **30**. A locking block **31** is arranged at each of two sides of the damping part **30** symmetrically and is locked with and fixed into a locking slot **641** of the mounting slot **64**.

While being assembled, each of the two posts **52** on the first component **50** passes the two slots **21** on the middle part of the armrest base **20** and the long groove **62** of the second component **60** and the guiding block **55** is connected to the bottom end of the post **52**. The guiding block is able to move within the guiding slot **63** on the bottom surface of the second component **60** and the positioning member **53** is against a damping part **30** while the positioning member **551** is contacted with another damping part **30**. The groove **54** is engaged with at least one projective body **44** of the open slot **43** of the press member **40**. The plurality of slots **61** of the second component is engaged with at least one projective body **71** of the adjustment member **70**. Moreover, a bolt **90** is passes the threaded hole **65** of the second component **60** to be assembled with and fixed on hole **200***a* of the armrest support **200**.

When the press part **41** is pressed, an elastic part **80** is compressed and leaning against the circular wall **251** of the receiving hole **25** so as to make the press member **40** move inward along the sliding slot **23** and the adjustment member **70** is pushed to move upward and separate with the second component **60**. While the press part **41** being released, the press member **40** is moved outward along the sliding slot **23** due to recovering elasticity of the elastic part **80**. And the adjustment member **70** is moved downward to be engaged with the second component **60** correspondingly.

The armrest pad **10**, the armrest base **20**, the press member **40**, the first component **50** and the adjustment member **70** are assembled into a removable armrest **1** while the first component **50** and the armrest support **200** are fixed and connected with each other. While being operated, the armrest **1** is moved forward and backward in relation to the second component **60**, the first component **50** and the armrest support **200** and is moved stably by the positioning member **53** of the first component **50** against a damping part **30**. The armrest **1** is positioned by the groove **54** engaged with the projective body **44** of the press member **40**. Thus the fore/aft movement and adjustment of the armrest **1** are achieved. Moreover, the armrest **1** can be moved in the left/right direction in relation to the second component **60** and the armrest support **200** and the movement of the armrest **1** is stable due to the positioning member **551** of the guiding block **55** against another damping part **30**. The moved armrest **1** is positioned by the slots **61** engaged with the projective body **71** of the adjustment member **70**. Thus the armrest **1** is adjusted by being moved in the left/right direction, as the arrows indicated in FIG. **7**.

Refer to FIG. **10**, a partial cross section of the embodiment in FIG. **7** along **10-10** line is revealed. A partial cross sectional view of the embodiment in FIG. **7** along **11-11** line is shown in FIG. **11**. The two figures show the state of the armrest **1** of the armrest adjustment device before adjustment and movement.

Refer to FIG. **12** and FIG. **13**, the press part **41** of the press member **40** is pressed so that the press member **40** is moved inward along the sliding slot **23** of the armrest base **20**, in the direction of the arrow A indicated. Thus the adjustment member **70** is driven to move upward and separated from the second component **60**. As to the elastic part **80**, it is stopped by the circular wall **251** of the receiving hole **25** to become compressed. The slots **54** of the first component **50** are corresponding to the channel **45** of the open slot **43** for leftward/rightward movement and adjustment of the armrest **1**. As shown in FIG. **13**, the armrest **1** is moved leftward, in the direction of the arrow B. The armrest **1** can also be moved to the opposite direction (the right side).

Refer to FIG. **14** and FIG. **15**, the armrest **1** of the embodiment in FIG. **12** is moved rightward, in the direction of the arrow C. The armrest can also be moved to the opposite direction (not shown in figure). After the armrest **1** being moved to a proper position, the press member is released and moved outward along the sliding slot **23** of the armrest base **20** by elastic recovery force of the elastic part **80**. And the plurality of slots **54** of the first component **50** are engaged with the projective body **44** of the open slot **43** so as to stop and position the armrest **1**.

Refer to FIG. **16**, the armrest pad **10** of the armrest **1** can be designed into a table-shaped armrest pad **10***a*, connected with other components in the above embodiment one and two. Thus the armrest **1** with the table-shaped armrest pad **10***a* can also be adjusted horizontally in different directions.

In accordance with the above structure, while the armrest **1** of the present invention being moved forward/leftward and leftward/rightward, the movement having damping effects due to contact between two damping parts **30** respectively and the positioning member **53** of the first component **50**/the

positioning member **551** of the guiding block **55**. Thus the movement of the armrest **1** is stable, smooth and quiet. Moreover, the displacement is controlled precisely by both the plurality of slots **54** of the first component **50** engaged with the projective body **44** on the open slot **43** of the press member **40** and the slots **61** of the second component **60** engaged with the projective body **71** of the adjustment member **70**.

In addition, the armrest adjustment device of the present invention features on simple structure and fewer components. Thus the assembling time is much reduced, the operation is easy and the movement is quiet and smooth. These lead to great difference between the present invention and prior arts. Therefore, the functions of the present invention are improved, the production cost is reduced and the competitiveness is increased.

Additional advantages and modifications will readily occur to those skilled in the art. Therefore, the invention in its broader aspects is not limited to the specific details, and representative devices shown and described herein. Accordingly, various modifications may be made without departing from the spirit or scope of the general inventive concept as defined by the appended claims and their equivalents.

What is claimed is:

1. An armrest adjustment device comprising an armrest disposed on a top surface of an armrest support and a lower part of the armrest support is connected to a chair seat;

the armrest is able to be adjusted forward and backward in relation to the chair seat; wherein the armrest includes:

an armrest pad;

an armrest base assembled with the armrest pad to form an armrest body having a rectangular space therein; an opening is mounted on one side of the armrest; symmetrical slots are arranged at a middle part of the armrest base along the same direction of movement of the armrest; a gap is mounted on an inner side of the armrest base and is aligned with the opening; a mounting slot with a projecting piece on one side is arranged at the armrest base;

a first component mounted inside the armrest body; the first component is disposed with two posts, a positioning member and a plurality of grooves arranged at regular intervals; the two posts are respectively arranged at a front part and a rear part on a bottom surface of the first component; each of the two posts passes through one of the symmetrical slots on the middle part of the armrest base to be assembled with and fixed on the armrest support correspondingly;

a damping part that is mounted in the mounting slot of the armrest base and is against the positioning member for providing damping effects; and

a press member passing the opening of the armrest base and mounted in the armrest body; a press part is on one end of the press member while an elastic part is arranged at the other side and the elastic part is elastically against the projecting piece on the side of the mounting slot of the armrest base; an open slot with an opening facing upwards is set between the press part and the elastic part; at least one projective body is disposed on a bottom of the open slot near the side of the elastic part while a channel is formed on the bottom of the open slot near the press part;

wherein when the press member is pressed and moved inward elastically, the groove of the first component is corresponding to the channel of the press member and is able to be moved along the channel;

wherein while the press member is released and moved outward elastically, the grooves of the first component are engaged with the at least one projective body of the press member.

2. The device as claimed in claim **1**, wherein a sliding slot is formed on a bottom surface inside the gap on the inner side of the armrest base and is allowing the press member to slide therein.

3. The device as claimed in claim **1**, wherein the mounting slot is arranged at a bottom surface of the armrest base.

4. The device as claimed in claim **1**, wherein the armrest pad is table-shaped.

5. An armrest adjustment device comprising an armrest disposed on a top surface of an armrest support and a lower part of the armrest support is connected to a chair seat;

the armrest is able to be adjusted forward, backward, leftward and rightward in relation to the chair seat; wherein the armrest includes:

an armrest pad;

an armrest base assembled with the armrest pad to form an armrest body having a rectangular space therein; an opening is mounted on one side of the armrest; symmetrical slots are arranged at a middle part of the armrest base along the same direction of forward/backward movement of the armrest; a gap is mounted on an inner side of the armrest base and is aligned with the opening; the armrest base is further disposed with a receiving hole having a circular wall around the receiving hole and the receiving hole is used to mount an adjustment member; at least one projective body is disposed on a bottom of the adjustment member and two symmetrical lugs are arranged at an upper part of the adjustment member and are over the circular wall of the receiving hole;

a press member passing the opening to be mounted in the armrest body; the press member includes a press part on one end and a slanted guide groove on the other end thereof; the slanted guide groove is corresponding to and assembled with the lug of the adjustment member;

an open slot with an opening facing upwards is set between the press part and the slanted guide groove; at least one projective body is disposed on a bottom of the open slot near the side of the slanted guide groove and a channel is formed near the press part; an elastic part is arranged between the press member and the receiving hole and is elastically against both the press member and the circular wall of the receiving hole; the press member is moved horizontally due to the slanted guide groove so that the adjustment member is able to move vertically in relation to the press member;

a second component arranged under the armrest body and fixed on the armrest support; a plurality of slots arranged at regular intervals on a middle part of a top surface of the second component is engaged with the projective body of the adjustment member; a long groove is disposed on a front part and a rear part of the second component, along the left/right direction; a guiding slot penetrating from the left side to the right side and corresponding to each long groove is arranged at a bottom surface of the second component and a mounting slot is mounted on the second component;

a first component arranged inside the armrest body; a post is disposed on a front part and a rear part respectively on a bottom surface of the first component; the post passing through one of the symmetrical slots of the armrest base and the long groove of the second component is connected with a guiding block on a bottom end thereof; the guiding block is arranged with a positioning member

and is in the guiding slot of the second component; the first component is further disposed with a positioning member and a plurality of grooves arranged at regular intervals; and

two damping parts, respectively mounted in the mounting slot of the armrest base and the mounting slot of the second component, and against the positioning member of the first component and the positioning member of the guiding block for providing damping effects;

wherein when the press member is pressed and moved inward, the adjustment member is moved upward and the projective body of the adjustment member is separated from the slot of the second component; the grooves of the first component is corresponding to the channel of the press member and is able to be moved along the channel; the guiding block on the bottom end of the post of the first component is movable in the guiding slot;

wherein when the press member is moved outward, the adjustment member is moved downward so that the projective body of the adjustment member is engaged with the slot of the second component and the groove of the first component is locked with the projective body of the press member.

6. The device as claimed in claim **5**, wherein the mounting slot of the second component is arranged at a bottom surface of the second component.

7. The device as claimed in claim **5**, wherein the lug of the adjustment member is arranged with a slanted surface that is engaged with the slanted guide groove press member correspondingly.

8. The device as claimed in claim **5**, wherein a threaded hole is arranged at a front part and a rear part of the second component; the second component is fastened on the armrest support by a bolt passing the threaded hole.

9. The device as claimed in claim **5**, wherein the first component is further arranged with a long groove that allows the adjustment member moving upward freely; the long groove is arranged along the same direction as the armrest, forward or backward.

10. The device as claimed in claim **5**, wherein a sliding slot is formed on a bottom surface inside the gap on the inner side of the armrest base and is allowing the press member to slide therein.

11. The device as claimed in claim **5**, wherein the armrest pad is table-shaped.

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